

NW District Irrigation Reservoirs 2013 Fall Survey Summary



Joe Rydell Fisheries Biologist

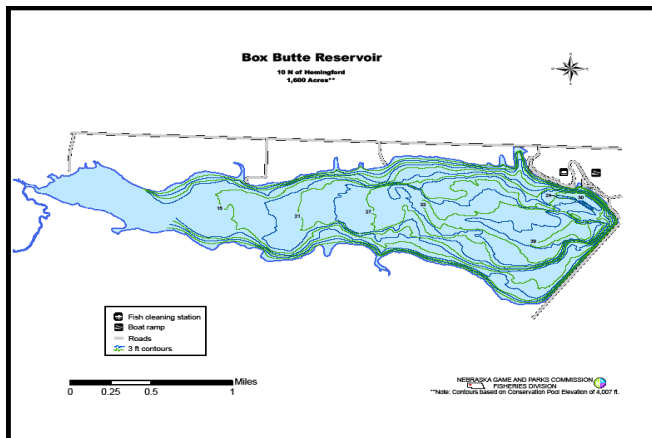
Several reservoirs located in the panhandle of Nebraska were built and managed for the primary purpose of water storage for irrigation. Water levels in these reservoirs can change drastically throughout a year and may make access difficult or impossible. The Bureau of Reclamation manages water in Box Butte Reservoir, Lake Minatare, Lake Winters Creek, and Big Lake Alice. Whitney Reservoir is managed by the Whitney Irrigation District. Oliver Reservoir was constructed by the Kimball Irrigation District, but has been turned over to Nebraska Game and Parks Commission to be maintained as a state recreation area and managed for recreational activities until January 1st, 2014 at which time the South Platte Natural Resources District will maintain the area open for public access. A map of lake locations can be found at www.outdoornebraska.ne.gov/gisapps/fishing.asp. Fishing opportunities exist in most irrigation reservoirs.

Box Butte Reservoir is located approximately 9 miles north of Hemingford on the western edge of the sandhills in the Nebraska panhandle. The reservoir was constructed in the early 1940's and impounds the Niobrara River which originates about 60 miles upstream. Box Butte Reservoir was designed for irrigation, flood control, and recreation. The lake levels can fluctuate drastically throughout the irrigation season.



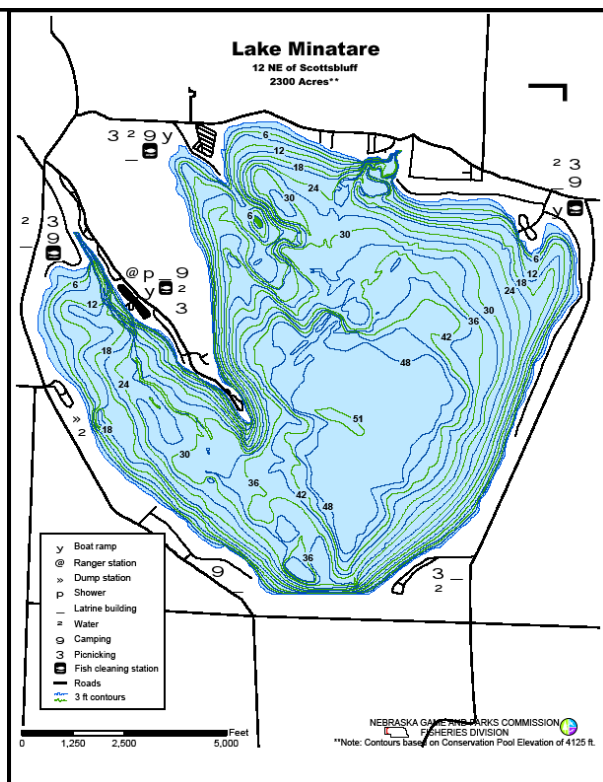
Box Butte Reservoir SRA is owned by the Bureau of Reclamation and encompasses 2,212 acres while the reservoir itself impounds approximately 1,600 of those acres. A State Recreation Area (SRA) encompasses the eastern end of the reservoir and a Wildlife Management Area can be found at the western end of the reservoir. These areas are all managed by the Nebraska Game and Parks Commission. The SRA offers electrical and primitive camping, water, boat ramp (located on the north side), fish cleaning station, swimming, picnic tables and shelters, and primitive restrooms.

Game fish species present in Box Butte Reservoir include: walleye, northern pike, channel catfish, blue catfish, yellow perch, bluegill, black crappie, rock bass, large-mouth bass, smallmouth bass, and pumpkinseed sunfish. It is an excellent open water fishery for all game fish species as well as a top ice fishing destination for pike, bluegill, and yellow perch. Box Butte is also known for its water clarity, making it desirable for bow fishing, underwater powered spear gunning, and surface spear action. Box Butte Reservoir currently holds 16 state records in the above categories.



Lake Minatare State Recreation Area is located 6 miles east and 8 miles north of Scottsbluff, NE in the North Platte River Valley. The area encompasses 2,873 acres, including a 2,147-acre reservoir when full. The reservoir was built in 1915 by the U.S. Bureau of Reclamation primarily for irrigation purposes. In 1986, jurisdiction of the area was granted to the U.S. Fish and Wildlife Service as part of the North Platte Wildlife Refuge. The lake and land adjacent to the reservoir is managed by the Nebraska Game and Parks Commission through a lease agreement for recreational activities while the Pathfinder Irrigation District controls water levels for irrigation.

Fishing is available at Lake Minatare for a variety of fish species which include walleye, white bass, wiper, channel catfish, blue catfish, smallmouth bass, largemouth bass, white and black crappie, and yellow perch.



Big Lake Alice and Lake Winters Creek are both part of the North Platte Wildlife Refuge located above Lake Minatare and supplied with water from the Lake Minatare supply canal. Big Lake Alice is drained low enough each year thus very few fish survive the winter months. Therefore Big Lake Alice is utilized as a rearing lake for shad, walleye, and perch to be sent down the supply canal and into Lake Minatare.

As part of the North Platte Wildlife Refuge, Lake Winters Creek has a few special fishing regulations. The lake is only open during daylight hours and anglers are restricted to non-gas motors. Anglers may find a variety of species at Lake Winters Creek including yellow perch, black crappie, bluegill, walleye, largemouth bass, northern pike, and smallmouth bass. To provide a refuge for migrating waterfowl, Lake Minatare, Lake Winters Creek, and Big Lake Alice are closed to public use from October 15th through January 14th each year.

Oliver reservoir (Kimball Reservoir) is located 8 miles west of Kimball, Nebraska off highway 30. It is a 270 acre reservoir located on a 917 acre state recreation area. The lease agreement for Oliver was not renewed turning the lake back over to the South Platte NRD on January 1, 2014. Oliver Reservoir was once a unique fishery providing both cool and coldwater fishing opportunities. The combination of drought and over appropriation of groundwater use has contributed to the loss of water inflows to the lake. Currently the lake is less than 100 surface acres but anglers may still find walleye, white crappie, bluegill, largemouth bass, yellow perch, channel catfish and an occasional tiger musky. Oliver Reservoir was not surveyed in 2013.



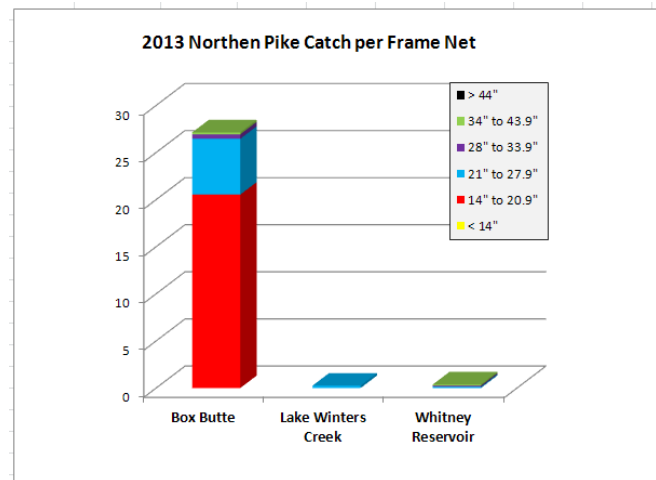
Whitney Reservoir is a 900 acre lake located about 1 mile West of Whitney, Nebraska owned and operated by the Whitney Irrigation District. A Wildlife Management Area located on the NE corner of the lake provides angler access with a boat ramp and pit toilet. The lake has a drastic summer drawdown making access nearly impossible by late summer. Game fish species present in Whitney Reservoir include: yellow perch, bluegill, black crappie, white crappie, northern pike, largemouth bass, channel catfish, white bass, and walleye.



Northern Pike

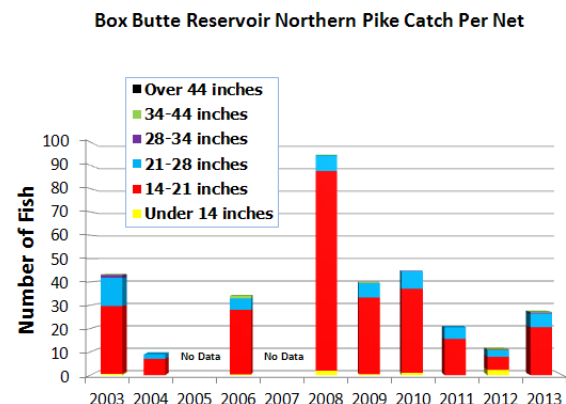
Northern pike are found in Box Butte, Whitney, and Lake Winters Creek. An occasional pike can be caught in Lake Minatare, however pike abundance is not significant enough to contribute to the overall fishery.

Northern pike sampling at Box Butte Reservoir is conducted in mid to late March or when the ice comes off, whichever comes first. The sampling gear consists of frame nets that are set perpendicular to the shoreline to intercept pike as they move into vegetated areas to spawn. Northern pike sampling at Whitney was conducted in conjunction with panfish surveys since northern pike is not a primary species the lake. A northern pike survey was conducted in 2013 at Lake Winters Creek.



In 2008, fisheries management placed a special regulation for northern pike at Box Butte. The regulation was a protected slot of 28-34 inches and an increased bag limit of 10 fish (only one can be over 34 inches). This new regulation is experimental and was done to increase size structure of pike in the lake and produce a better quality pike fishery. Whitney Reservoir and Lake Winters Creek have a daily bag limit of 3 pike of any size with a possession limit of 10.

Box Butte Reservoir continues to be the top northern pike destination in the panhandle with a catch rate of 27 fish per frame net. This is up from 2012 with a significant increase in fish between 14 and 21 inches. These fish probably came from an increased recruitment during the high waters in 2011. Box Butte northern pike size structure is similar to 2012 as 24 % of the pike sampled in 2013 were over 21 inches compared to 28% in 2012. Approximately 1.7% of the northern pike sampled were in the protected slot limit of 28 to 34 inches with 0.7 % above the slot.



Northern Pike (Continued)

Northern pike anglers looking for large fish should not be discouraged by the low catch rates in Whitney Reservoir or Lake Winters Creek. Since the reported catch rates are from panfish surveys it is likely that the total abundance is greater than reported. Also the average size northern pike sampled in 2013 was 31 inches in Whitney, 24.1 inches in Lake Winters Creek and only 19.5 inches in Box Butte.

Anglers targeting northern pike should have the best luck through out the winter and April - June for open water. Suspending jerk baits, spinner-baits, and live bait rigs are all popular methods for northern pike fishing.



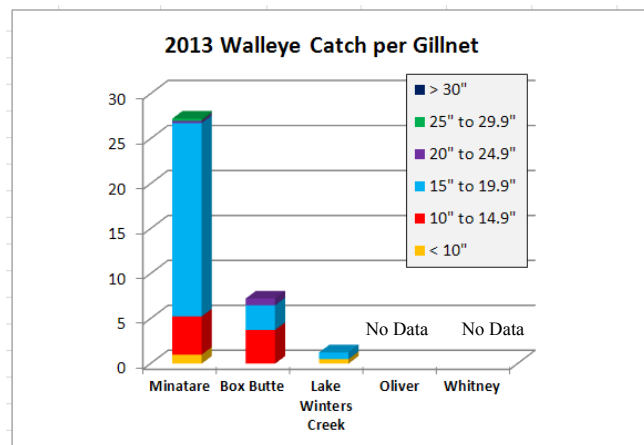
Pair of slot pike collected at Box Butte Reservoir in 2013

Walleye

Walleye are found in Oliver Reservoir, Lake Minatare, Box Butte Reservoir, Whitney Reservoir, and Lake Winters Creek.

Oliver Reservoir and Whitney Reservoir were not surveyed in 2013 due to low water.

Lake Minatare continues to be the top walleye destination in the panhandle with 27.25 walleye per gillnet. The average size walleye sampled in Minatare in 2013 was 15.8 inches with 80.7% of the walleyes surveyed over the minimum size of 15 inches. There's a good abundance of 15 to 17 inch walleye with very few larger fish in Lake Minatare.



Box Butte Reservoir had a great walleye season in 2013 and the fall survey shows that anglers were hard on the population. Box Butte walleye abundance was down to 7.25 fish per gill net in 2013 compared to 13 fish per net in 2012. Walleye anglers should continue to see some nice fish in 2014 with approximately 10% of the fish between 20 and 25 inches and 48% of the population over 15 inches.

After discovering a walleye population in Lake Winters Creek in 2012, walleye were added to the stocking schedule for 2013. Anglers can have some walleye success but will likely find better action as a few year-classes establish.



11 pound walleye caught at Box Butte in 2013

Walleye (Continued)

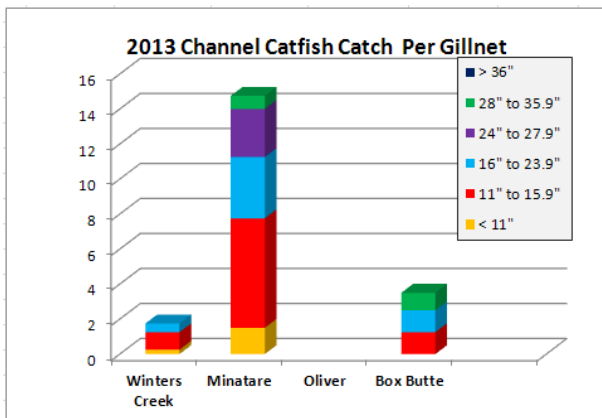
Walleye are stocked annually in Lake Minatare, and Whitney Reservoir. Box Butte Reservoir has a natural recruiting walleye population and does not require supplemental stocking.

In 2013, walleye fingerlings were also stocked in Big Lake Alice to act as a rearing pond to supplement the walleye fishery in Lake Minatare. Big Lake Alice is mostly void of game fish every year due to the drastic draw down in the fall and into the winter. The stocked walleye have little competition for limited resources and grow larger and faster than walleye stocked in Minatare. During the fall draw down, water from Big Lake Alice is drained through the Minatare supply canal and into Lake Minatare.

Oliver Reservoir may not receive any additional fish stocking unless water levels significantly increase.

Channel Catfish

Lake Minatare will be the top catfish reservoir in 2014 for abundance and size. The 2013 fall survey had a good distribution of all sizes of channel catfish and an overall catch rate of 14.75 fish per net. Box Butte had a lower catch rate but some very large fish including the 20 lb. channel catfish pictured below. The first ever flathead catfish was discovered in Box Butte Reservoir during the 2013 survey. Flathead catfish have not been stocked in Box Butte are not known to be in the Niobrara River above the reservoir. It is unknown how the 5 lbs 6 oz. fish got into Box Butte Reservoir.



Box Butte and Lake Minatare have also been stocked with blue catfish. Anglers are required to know the difference between blue and channel catfish since blue catfish are managed as a trophy fishery with a bag limit of 1, and channel catfish have a bag limit of 5.



Blue or Channel?

1. Blue catfish have a long straight anal fin while a channel catfish's anal fin is rounded.
2. Small channel catfish will have spots across its body while blue catfish will not.

2013 Channel Catfish Stocking

Lake	# Stocked	Size Stocked	Rate (# / Acre)
Box Butte	3216	10.6 inch	2.0
Minatare	8800	10 inch	4.0
Whitney	4541	10 inch	5.0
Lake Winters Creek	2300	10.5 inch	9.8
Oliver	500	10 inch	20



20 lb. channel catfish caught at Box Butte.

Black Bass

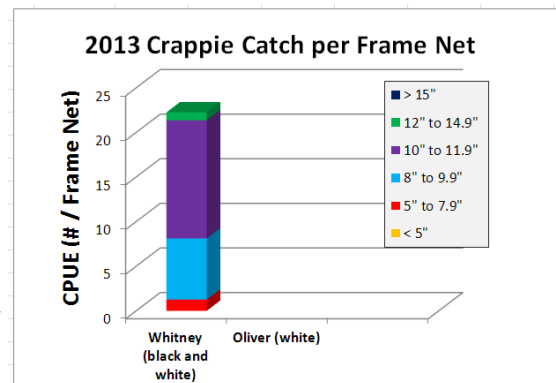
Bass were not surveyed in 2013 in any of the irrigation reservoirs. Fluctuating water levels make bass surveys difficult to perform as water levels are usually high, flooding terrestrial vegetation and timber during the spring and early summer when bass surveys are typically conducted. Largemouth bass can be found in all irrigation reservoirs while smallmouth are only found in Box Butte Reservoir and Lake Minatare. Anglers looking for bigger bass should concentrate efforts on Box Butte Reservoir.

White Bass and Wipers

White bass can be found in Whitney Reservoir and Lake Minatare. Wipers are only found in Lake Minatare. The inlet canal at Lake Minatare is a popular destination for white bass and wipers while the lake is filling. White bass and wipers were sampled in low abundance in 2013 in Lake Minatare with a catch rate of 1.5 and 1.25 fish per net respectively. Although the average size wiper surveyed was only 10.3 inches anglers do very well on wipers over 18 inches. Wipers get stocked annually in Minatare at a rate of 3 fingerling per acre.

Panfish

Whitney Reservoir was the only irrigation reservoir surveyed for crappie in 2013. The population consists of both black and white crappie. Extremely low water in the Fall of 2012 resulted in a large fish kill and Whitney's crappie population went from 64 fish per net in 2012 to only 22 fish per net in 2013. Crappie are very prolific and should bounce back quickly with higher waters. Anglers should find good crappie fishing with 63 % of the population over 10 inches. Box Butte and Minatare also have quality crappie fisheries but were not surveyed in 2013.



The top irrigation reservoir for bluegill is Box Butte Reservoir. Although no panfish surveys were conducted in 2013, creel survey and angler reports suggest continued quality fishing for bluegill.

Lake Minatare is the top irrigation reservoir for yellow perch with a fall survey of 6.25 perch per gillnet and an average size of 11.4 inches. Box Butte yellow perch population has also rebounded over the past couple years and had a similar catch rate of 8 perch per gillnet but with a smaller average size of 8.9 inches. Anglers can expect to see quality perch fishing in the coming future.

For additional information about fisheries management at Lake Minatare, Whitney Reservoir, Lake Winters Creek, or Box Butte Reservoir please contact the following personnel by phone or email addresses listed below.

District Supervisor: Al Hanson, (308)763-2940 al.hanson@nebraska.gov

Fisheries Biologist: Joe Rydell, (308)763-2940 joe.rydell@nebraska.gov

Fisheries Biologist: Zac Brashears, (402)376-8080 zac.brashears@nebraska.gov